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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Masayuki Sakata

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EXAMINER

CHUNG, JI YONG DAVID

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/987,517	Applicant(s) SAKATA, MASAYUKI	
	Examiner Ji-Yong D. Chung	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/28/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Remarks

1. The arguments filed by the applicant's representative on February 28, 2006 have been considered, but they are not deemed fully persuasive.

In the Amendment, the applicant has pointed out a number of inconsistencies in the prior Office action. The Office corrects those errors.

Applicant's arguments, against 35 U. S. C. 103 rejections, seem to be stated on pages 2 and 3 of the Amendment. In summary, the applicant says

(1) Voit et al., as cited by the Examiner discloses general routing of Internet telephone calls routing, and not in the context of a network/AAAL device at all, and thus, Voit et al. is not relevant to Chuah (i.e., not combinable).

(2) the connections in Chuah are based on subscriber relationships. This individual, one-to-one connection among networks teaches away from identifying a lower charge communication network.

(3) Chuah does not disclose claim 1 feature of "an AAAL device provided in ... over the Internet"

(4) Chuah does not disclose claim 1's feature of "wherein said AAAL device ... should be allowed or not."

In reference to the applicant's first argument, Voit et al., as the applicant has noted, is related to the routing of Internet telephone calls. However, Voit et al. also addresses routing issues in the context of authorization, authentication, and accounting (AAA). See Fig. 1B. Thus, in the context of AAA, it is relevant to Chuah.

In reference to the applicant's second argument, contrary to what the applicant states, "subscriber relationship" in Chuah does not teach away from identifying a lower charge communication network. An ISP may deliver, to a user, a subscriber services available from other networks. In such cases, the ISP may still like to select the lowest cost services, as they provide the greatest profit margin. See Figs. 1, 6, 15, 16, 18 and 19 in Chuah. See in Fig. 18 that there are parts of *other networks*. Compare Fig. 1 and 6 for the indication of the Internet.

In reference to the applicant's third argument, the applicant is directed to Fig. 1 and Figs 1, 6, 15, 16, 18 and 19. They show the Internet, which is inherently composed of "plurality of communication networks, using different communication technologies," as cited in claim 1. Claim 1 also cites "each of said plurality of communication networks using the Internet protocol." All networks in the Internet, at least in part, use Internet Protocol.

In reference to the applicant's fourth argument, the applicant is reminded that AAA is a feature that authorizes a particular service. The service depends on the network that a user has access to. In the Chuah and Voit et al. combination, the selection of networks depends on the cost of their use. However, the combination also has authorization mechanism, which checks access to every network that is accessed to service the user (See lines 5-35 in column 19 for in Chuah for the authentication procedure that involve both the foreign registration server as well as the home registration server). Rephrased, for each "lower charge communication network based

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on said charge information,” the Chuah and Voit et al combination would check whether the registration request “should be allowed or not,” as required by the limitation of claim 1. See lines 36-61 in column 18, for the indication there are multiple networks involved.

Comments on the Future Amendment

2. Claim 15 and other claims that depend on claim 15 are close to overcoming the prior art of record.

In dealing with applicant’s fourth argument above, the Office has elected a particular interpretation of the last limitation in claim 1. Such interpretation maybe obviated by inserting additional claim language to further clarify and sharpen the claim scope. The applicant should be able to overcome the prior art of record, in reference to claim 15 and its dependent claims.

Claim 17 is a method analogue of claim 15. If the applicant were to amend claim 17 so that its (1) language more closely reflects language of claim 15 and (2) claim 17 contains the same substantive future amendments, claim 17 should overcome the prior art of record.

Applicant is encouraged to contact the Office for further discussion of the claims, by either email or telephone.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1-3, 8-10, and 15-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah et al (U.S. Pat. No. 6,400,722, Chuah hereinafter), in view of Voit et al. (Pat. No. 6,157,636, Voit hereinafter)

Claims 1 and 8 are rejected for the reasons given in the Office Action dated May 13, 2005 for the rejection of claims 1 and 6 (and 8 and 13). Current claims 1 and 8 include limitations that are broader than those of limitations in prior version of claims 1 and 6 (and claims 8 and 13) at the time of the Office Action dated May 13, 2005.

With respect to **claim 1**, Chuah *discloses communication system which a mobile terminal can be connected to [lines 8-16, column 1] and comprises a plurality of communication networks using different communication technologies [lines 8-16, column 1] each of said plurality of communication networks use the Internet Protocol to connect to the Internet [The Internet requires IP protocol] said communication system comprising:*

an information service network for managing accounting information about said mobile terminal and providing services [40, Fig. 2];

an AAAL (Authentication, Authorization and Accounting Local) device provided in each of said plurality of communication networks for sending charge information about the network in

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which said AAAL device is provided over the Internet [AAAL in Chuah is the accounting server in the serving IWF's MSC (see lines 7-9, column 30)].

Chuah does not disclose and Voit discloses

wherein said AAAL device automatically identifies a lower-charge communication network based on said charge information to determine whether said position registration should be allowed or not. V/IP station (PC, Fig. 12 in Voit) performs local computation ("accounting") in order to obtain the least expensive pathway (lines 14-27, column 5) based on information from C2 and C3, which supply information on authentication and authorization (See from line 6, column 14 to line 28, column 15). See from line 39, column 9 to line 62, column 10 for part description of PC user to C3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Chuah and Akhtar's combination to Voit's V/IP, because as it is suggested in Chuah's disclosure, lines 5-32, column 2, that Chuah's invention provides hooks (or infrastructure) for the communication service such as V/IP (voice over the Internet).

Claim 8 cites all the corresponding limitations of claim 1, but in method form rather than in apparatus form. The reasons for the rejections of claim 1 apply to claim 8.

With respect to **claim 2**, Chuah teaches that *said plurality of communication networks include at least a mobile communication network, public telephone network, and private network* [Fig. 1 shows public telephone network (6, PSTN) and private network (18, intranet). Note that

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Fig. 1 illustrates the networks in which Chuah's invention operates, see lines 25-30, column 3.

Fig. 2 shows the mobile communication network. See also from line 60, column 5 to line 6, column 6].

With respect to **claim 3**, Chuah discloses *said HA device* [As noted above, HA in the current application is IWF1 and home registration server] *performs the position registration of said mobile terminal in response to said position registration request sent from said FA device* [See lines 4-11, column 8, for the function of home registration server and see lines 49-53, column 10 for the description of how a foreign registration server works with the home registration server].

With respect to **claim 15**, Chuah *discloses communication system which a mobile terminal can be connected to* [lines 8-16, column 1] *and comprises a plurality of communication networks using different communication technologies* [lines 8-16, column 1] *each of said plurality of communication networks use the Internet Protocol to connect to the Internet* [The Internet requires IP protocol] *said communication system comprising:*

an information service network for managing accounting information about said mobile terminal and providing services [40, Fig. 2];

a Mobile IP (Internet Protocol) HA (Home Agent) device [HA in the current application is the combination of IWF1 and home registration server in Chuah. See lines 12-21, column 11 and lines 56-65, column 45. For IWF1, see Fig. 37. Also see lines 18-22, column 13. See lines 18-21, column 42 for Mobile IP and HA.] *provided in said information service network for*

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constantly managing which said mobile terminal exists in and delivering received data to an appropriate network over the Internet [Fig. 37 and 38 show IWF1 delivering messages and Fig. 2 shows the connection to the Internet] and,

an FA (Foreign Agent) device provided in each of said plurality of communication networks for sending a position registration request from said mobile terminal to said HA device [FA in the current application is FA and the foreign registration server in Chuah. See lines 12-21, column 11 and lines 56-65, column 45] *and transferring data delivered from said HA device over the Internet to said mobile terminal when said mobile terminal is under the coverage of said FA device* [See lines 44-49, column 9 for FA's role in delivering data from HA. See lines 12-26, column 10 for "coverage"];

wherein the position registration request and a reply corresponding to said position registration request communicated between said HA device and said FA device are used to flexibly enable communications between said plurality of communication networks and the continuation of the communications across said plurality of communication networks [This limitation indicates HA and FA are used in various networks. Chuah shows this in Figs. 1-2].

With respect to **claim 16**, Chuah discloses *an AAAL (Authentication, Authorization and Accounting Local) device provided in each of said plurality of communication networks for sending charge information about the network in which said AAAL device is provided over the Internet* [AAAL in Chuah is the accounting server in the serving IWF's MSC (see lines 7-9, column 30)] and

an AAAH (Authentication, Authorization and Accounting Home) device provided in said information service network for managing accounting information about said mobile terminal according [AAAH in accounting server in the home IWF (see lines 9-10, column 30)] to said charge information sent from said AAAL device over the Internet.

Claims 17, 18, 9, and 10 cite all the corresponding limitations of claims 15, 16, 2, and 3, but in method form rather than in apparatus form. The reasons for the rejections of claims 15, 16, 2, and 3 apply to claims 17, 18, 9, and 10.

With respect to **claim 19**,

a communication system including a plurality of communication networks using different communication technologies, said communication system comprising [lines 8-16, column 1]:

a mobile terminal for sending a position registration request from said mobile terminal to a Home Agent (HA) device via a Foreign Agent (FA) [HA in the current application is the combination of IWF1 and home registration server in Chuah. See lines 12-21, column 11 and lines 56-65, column 45. For IWF1, see Fig. 37. Also see lines 18-22, column 13. See lines 18-21, column 42 for Mobile IP and HA. Fig. 37 and 38 show IWF1 delivering messages and Fig. 2 shows the connection to the Internet.].

an AAAL (Authentication, Authorization and Accounting Local) device provided in each of said plurality of communication networks for sending charge information about the network in which said AAAL device is provided over the Internet [AAAL in Chuah is the accounting server in the serving IWF's MSC (see lines 7-9, column 30)]; and

an AAAH (Authentication, Authorization and Accounting Home) device for managing accounting information about said mobile terminal according to said charge information sent from said AAAL device over the Internet [AAAH in accounting server in the home IWF (see lines 9-10, column 30)].

Claim 20 substantively cites all the corresponding limitations of claim 19, but in method form rather than in apparatus form. The reasons for the rejections of claim 19 apply to claim 20.

5. **Claims 5 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah and Voit in view of Akhtar et al (Akhtar hereafter).

With respect to **claim 5**, Chuah and Voit do not disclose, but Akhtar discloses that *said AAAL device determines whether said position registration should be allowed or not based on charge information added to the position registration request from said mobile terminal, said position registration request being input through said FA device*. In Akhtar, see Fig. 56A, in which LSF performs AAA function in response to MIP FA's registration request. The registration depends on the user's payment of his bills. See lines 62-64, column 32 for the description.

The motivation for combining Chuah and Akhtar's inventions is suggested by Akhta. Akhtar's discussion on billing is within the context of systems that have FA and AAA, like the one disclosed by Chuah. See lines 57-64, column 32 for LSF ("AAAL"), see Fig. 11 for FA (LSF), AAAL (AAA in Visiting network), AAAH (AAA in Home Network), and HA (NSF).

Claim 12 lists all the corresponding limitations of claim 5, but in method form rather than in apparatus form. The reasons for the rejections of claim 5 apply to claims 12, and therefore, the claim 12 is rejected for the same reasons.

6. **Claims 7 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah and Voit in view of Amos.

With respect to **claim 7**, Chuah and Voit do not disclose and Amos teaches a simple cash dispenser that operates over the Internet and wireless network. See lines 31-35, column 1, and Fig. 2 in Amos.

The motivation for applying Chuah to Amos is suggested in Chuah's disclosure, lines 27-32, column 2, in which Chuah discusses how Chuah's invention provides hooks (or infrastructure) for various communication services, including ones that use the Internet. Amos's cash dispenser (H in Fig. 1) operates over the Internet. See Fig. 2.

Claim 14 lists all the corresponding limitations of claim 7, but in method form rather than in apparatus form. The reasons for the rejections of claim 7 apply to claims 14, and therefore, the claim 14 is rejected for the same reasons.

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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji-Yong D. Chung whose telephone number is (571) 272-7988. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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